



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200
Fax 613 632-5246

Purchasing Receipts

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
PO041320	MES002-VC	1	1	Net 60	M17-4-H900-R2.250	17-4 SS Round Bar 2.250 Dia. : MATERIAL: 17-4 PH CONDITION H900 MATERIAL: 17-4 PH / S I7400 / TYPE 630 SS ROUND BAR GRAIN MUST BE ALONG LENGTH OF BAR MINIMUM YIELD STRENGTH PER TABLE MINIMUM ULTIMATE STRENGTH PER TABLE SPECIFICATION: AMS 5643 OR ASTM A564 H900 MIN. YIELD TENSILE 170 KSI / MIN. ULTIMATE TENSILE 190 KSI				12	10/29/2018	12		S124008	Stock	10/31/2018	\$ 138.35 / ft	1		\$1,707.24	Metaux Solutions
										Total:		12								\$1,301.61	

Plex 11/1/2018 4:51 PM dart.Tollis.Andrew



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041320**

Supplier: MES002-VC
Metaux Solutions
2625 boul Jacques-Cartier Est
Longueuil
QC
J4N 1L7 Canada
Phone: 800 558 8858
Fax: 514 633 8044

PO No: PO041320

PO Date: 10/11/18

Due Date: 10/29/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

E-MAILED

OCT 11 2018

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pynt Terms: Net 60

Freight Terms:

Special Comments: bid 29359

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1		M17-4-H900-R2.250		17-4 SS Round Bar 2.250 Dia. : MATERIAL: 17-4 PH CONDITION H900 MATERIAL: 17-4 PH / S 17400 / TYPE 630 SS ROUND BAR GRAIN MUST BE ALONG LENGTH OF BAR MINIMUM YIELD STRENGTH PER TABLE MINIMUM ULTIMATE STRENGTH PER TABLE SPECIFICATION: AMS 5643 OR ASTM A564 H900 MIN. YIELD TENSILE 170 KSI / MIN. ULTIMATE TENSILE 190 KSI	Firmed	-	10/29/18	12 ft	0 ft	12 ft	\$138.35/ft	\$1,660.20

Grand Total: \$1,660.20

Handwritten signature and initials



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO041320

Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 10/11/18 11:30 AM dart.lavoie.chantal

METAUX SOLUTIONS INC
2625 BOUL JACQUES CARTIER EST
LONGUEUIL, QUEBEC
J4N 1L7 *Tel.* : 450 641-3330

Bid 03/10/2018 29359

Sales Rep. : JEROME PRIMEAU
Reference : chantal
Expiration Date : 01/01/2019

Customer : 6323336

DART AEROSPACE LTD
1270, ABERDEEN STREET
HAWKESBURY, ONTARIO
K6A 1K7

Ship To :

Same

Tel.: 1 613 632-3336

<i>Item No.</i>	<i>Description</i>	<i>Qty</i>	<i>Price</i>	<i>Total</i>	<i>Tx</i>
	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N				
MR31441H	4140 HTSR ROU 2.250 DIA 1 x 72" ht;	6	51.30	307.80	A
MR341H	4140 HTSR ROU 3.000 DIA 1 x 48" ht;	4	61.50	246.00	A
MR31441H	4140 HTSR ROU 3.250 DIA 1 x 48" ht;	4	102.25	409.00	A
MR541H	4140 HTSR ROU 5.000 DIA 1 x 48" ht;	4	174.50	698.00	A
SR214174	STAIN ROND 2.250" X 17-4-PH cond. h900 1 x 12' r/l ht;	12	138.35	1 660.20	A
SR112174	17-4PH ROU 1.500 DIA cond. 1 x 12' r/l ht;	12	62.75	753.00	A
SF122124	304 FLA 500 X 2.500 1 x 12' r/l ht;	12	29.90	358.80	A
ASQ114	ALU SQU 1.250 6061 T6 1 x 12" ht;	12	8.75	105.00	A
AF112	ALU FLA 1.000 X 12.00 6061-T6	12	69.40	832.80	A

*** Continued on Next Page ***

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 LONGUEUIL, QUEBEC
 J4N 1L7 **Tel. : 450 641-3330**

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Sales Rep. : JEROME PRIMEAU
Reference : chantal
Expiration Date : 01/01/2019

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DART AEROSPACE LTD
 1270, ABERDEEN STREET
 HAWKESBURY, ONTARIO
 K6A 1K7

Ship To :

Same

Tel.: 1 613 632-3336

<i>Item No.</i>	<i>Description</i>	<i>Qty</i>	<i>Price</i>	<i>Total</i>	<i>Tx</i>
	1 x 12'				
	ht:				
AP3875	ALU PLATE .375" 7075-T6 4 x 6.00" x 72.00" offer 72.00" lg cut in plate ht: 10/12 jours 17-4 2.25" dia. le reste 5/7 jours	4	297.00	1 188.00	A

49.50 \$ a ft

	COPY	Subtotal	6 558.60
A) Regist :		HST :	852.62
		Total :	7 411.22

Shipping Order

29/10/2018

METAUX SOLUTIONS INC
2625 BOUL JACQUES CARTIER EST
LONGUEUIL, QUEBEC
J4N 1L7
Tel. : 450 641-3330

Order : 138814
Reference : 41320
Ship : PICK UP / PICK UP

Customer : 6323336**Ship To**

DART AEROSPACE LTD
1270, ABERDEEN STREET
HAWKESBURY, ONTARIO
K6A 1K7

Same

Tel. : 1 613 632-3336

Item No.	Description	Qty	Qty. Delivered	B/O Qty
SR214174	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N STAIN ROND 2.250" X 17-4 PH COND H900 1 X 12.33' R/L HT. 9SJ0048-G60	12.33	12.33	Ø

LIVRE
JP

Ref. : _____**Shipping :** _____
Package No : _____**Merchandise Received:** _____



GLORIA MATERIAL TECHNOLOGY CORP. INSPECTION CERTIFICATE



Messrs:
Order No.:
File No.:
Grade: 17-4 ANN
Size: 2-1/4"
Heat-Lot No.: 9SJ0048-G60
Condition: HR-Solution Annealed-Ground

P.O.No.:
Date: 06/19/2018
Weight: 1216KG 2680.82LB
P'cs: 16

Chemical Composition (wt%)							
	C	Si	Mn	P	S	Ni	Cr
Min.							
Max.	0.07	1.00	1.00	0.040	0.030	3.00	15.00
Result	0.01	0.37	0.58	0.019	0.001	4.73	15.31
	Mo	Cu	Nb+Ta	Nb			
Min.		3.00	0.15	5C			
Max.	0.50	5.00	0.45	0.45			
Result	0.16	3.34	0.25	0.24			

Mechanical Properties Spec.

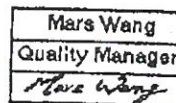
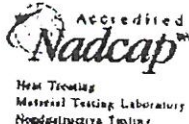
	Hardness	Grain Size	Delta-Ferrite
		ASTM E112	AMS 2315
Spec. Min.	1/2R	T	L
Spec. Max.	363HBW		5%
Result	301HBW	7	0.3%

H900 Hardness (Ave)

Spec. Min.	1/2R L
Spec. Max.	40HRC
Result	44HRC

Macro Etching

	MACRO ETCH	MACRO ETCH
	ASTM E340	ASTM E340
Spec.	B	T
Result	OK	OK



Page 1 of 3

Our quality and environment management systems have been certified by AS9100, ISO9001 QMS, ISO14001 EMS, OHSAS18001 OHS, and NADCAP. We hereby certify that the material described herein has been manufactured and tested with satisfactory results in accordance with the requirement of the above material specification. Inspection Certificate comply with EN 10204 3.1.



台灣台南市新營區新中路35號/NO.35, HSIN CHUNG RD., HSIN YING, TAINAN, TAIWAN
TEL: 886-6-6520031 / FAX: 886-6-6230877
<http://www.gmtc.com.tw>



GLORIA MATERIAL TECHNOLOGY CORP. INSPECTION CERTIFICATE



Messrs:

Order No.:

File No.:

Grade: 17-4 ANN

Size: 2-1/4"

Heat-Lot No.: 9SJ0048-G60

Condition: HR-Solution Annealed-Ground

P.O.No.:

Date: 06/19/2018

Weight: 1216KG 2680.82LB

P'cs: 16

Tensile Test

	Elongation(A)	Tensile Strength(Rm)	Yield Strength(0.2% Rp)	Reduction of Area(Z)
	1/2R L (Ave)	1/2R L (Ave)	1/2R L (Ave)	1/2R L (Ave)
Unit	%	KSI	KSI	%
Min.	10	190	170	40
Max.				
Result	14	201	180	47

Non-Metallic Inclusions :AMS 2303

Severity Frequency

Seat

Max.

Result 0 0

REDUCTION RATIO: Min 4.0:1

Specification:

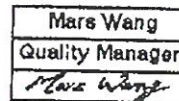
1. ASTM A564/A564M-13.
2. ASME SA564(2013).
3. AMS 5643U.
4. ASTM A484/A484M-16.
5. AMS 2303F.
6. AMS 2315G.
7. EN 10204 3.1.
8. FIDELITY 17-4PH ROUND BAR REVISION 03/15/13.

Remark:

1. MANUFACTURING PROCESS: EAF+LHF+VOD, FORGED OR HOT ROLLED.
2. SOLUTION TREATMENT: 1900 +/- 25 DEGREE F FOR 30 MIN/INCH (MINIMUM OF 1/2 HOUR), FAST COOLING TO BELOW 90 DEGREE F.
3. MECHANICAL PROPERTIES TESTED AS PER H900 CONDITION.
4. MATERIAL IS FREE FROM KNOWN CONTACT WITH MERCURY AND RADIUM.



Heat Treating
Material Testing Laboratory
Nondestructive Testing



Page 2 of 3

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<http://www.gmtc.com.tw>



GLORIA MATERIAL TECHNOLOGY CORP.
INSPECTION CERTIFICATE



Messrs:

Order No.:

File No.:

Grade 17-4 ANN

Size: 2-1/4"

Heat-Lot No.: 9SJ0048-G60

Condition: HR-Solution Annealed-Ground

P.O.No.:

Date: 06/19/2018

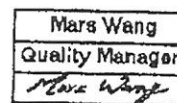
Weight: 1216KG 2680.82LB

P'cs: 16

5. MATERIAL IS FREE FROM WELDS OR WELDING REPAIRS.
6. MATERIAL IS FREE FROM RESIDUAL RADIOACTIVITY.
7. NO PRODUCT THAT CONTAIN OR WERE MADE WITH ODC'S.
8. ULTRASONIC TEST IS ACCEPTABLE PER ASTM A388.
9. THE MATERIAL IS THE SAME AS AISI 630.
10. COUNTRY OF ORIGIN: TAIWAN.



Heat Treating
Material Testing Laboratory
Nondestructive Testing



Page 3 of 3

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台灣台南市新營區新中路35號/NO.35, HSIN CHUNG RD., HSIN YING, TAINAN, TAIWAN

TEL: 886-6-6520031 / FAX: 886-6-6230877

<http://www.gmtc.com.tw>

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
331265	1

CLIENT / customer 780

METAUX SOLUTIONS

2825 BOUL. JACQUES-CARTIER EST

LONGUEUIL

QC J4B 6G6

LIVRÉ À / shipped to:

METAUX SOLUTIONS

2825 BOUL. JACQUES-CARTIER EST

LONGUEUIL

QC J4B 6G6

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
45855	N/A	17-4PH		

SPÉCIFICATIONS DU PROCÉDÉ

processing specifications

AGE HARDEN

CONDITION H 900

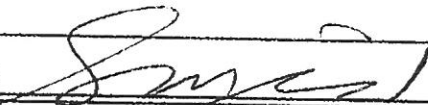
EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	40 - 47 HRC	1 (907)	48 - 47 HRC

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
1	166	PIECES (1) BARRE 144.5" X 2.25" 1 NIL

2/11/18.

COMMENTAIRES / comments

APPROUVÉ par / Approved by:



DATE: 2018-10-26

APPROUVÉ

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 17-4 PH / S17400 / TYPE 630 SS ROUND BAR
GRAIN MUST BE ALONG LENGTH OF BAR
MINIMUM YIELD STRENGTH PER TABLE
MINIMUM ULTIMATE STRENGTH PER TABLE

SPECIFICATION: AMS 5643 OR ASTM A564

PART NUMBER: M17-4- HHHH- R X.XXX
COND O.D.

WHERE: HHHH SPECIFIES THE MATERIAL CONDITION (PER TABLE BELOW)
X.XXX = DIAMETER (IN INCHES)

MATERIAL CONDITION TABLE:

CODE	CONDITION	MIN YIELD TENSILE STRENGTH (KSI)	MIN ULTIMATE TENSILE STRENGTH (KSI)
(OMITTED)	NONE SPECIFIED (CONDITION A NOT ACCEPTABLE)	100	150
H900	H900	170	190
H925	H925	155	170
H1025	H1025	145	155
H1075	H1075	125	145
H1100	H1100	115	140
H1150	H1150	105	135
CONDA	CONDITION A (SOLUTION TREATMENT)		

NOTES: MATERIAL IN H800 AND H825 CONDITION NOT RECOMMENDED FOR TENSION OR SHEAR APPLICATIONS IN COLD WEATHER CONDITIONS

MATERIAL IN H800 AND H825 CONDITION NOT RECOMMENDED FOR APPLICATIONS WHERE STRESS CORROSION CRACKING IS POSSIBLE

CONDITION A NOT TO BE USED IN DESIGN FOR FINAL PRODUCT AND SHOULD ALWAYS BE HEAT TREATED

EXAMPLES:

PART	DESCRIPTION	PART NUMBER
4.000"	DIAMETER BAR MIN UTS = 150 KSI MIN YTS = 700 KSI	M17-4-R-0.000
2.500"	DIAMETER BAR H900 CONDITION	M17-4-H900-R2.500
3.250"	DIAMETER BAR H1025 CONDITION	M17-4-H1025-R3.250
0.750"	DIAMETER BAR A CONDITION	M17-4-CONDA-R0.750

RELEASED
2017-10-31
E1017-728

APPROVED

C	ADDED MATERIAL CONDITION (CIR17-107)	NO	NO	17 09 14
B	REFORMAT DWG. S174007TYPE 630 ADDO TO PURCHASE MATERIAL (ZN DB-1), ADD A564 SPEC (CB-1), REF PAR 08420A	VS	VS	10 05 20
A	NEW ISSUE	CP	CP	05 03 16
REV.	DESCRIPTION	BY	DATE	
DESIGN	NO			
DRAWN	NO			
CHECKED	CP			
MFG. APPR.	RA			
APPROVED	WM			
DE APPR.	CP			
DATE	17 09 14			

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M17-4-H900-R2-250
 DATE: 18/11/01

PO / BATCH NO.: P0041320/S124008

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 12.344
 QUANTITY INSPECTED: 12.344
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 2.250"
 THICKNESS RECEIVED: 2.250"
 SHEET SIZE ORDERED: -
 SHEET SIZE RECEIVED: -

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y N	
CORROSION	Y <input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y N	ASTM A564
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y N	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y N	HT: 9550048- G60
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AI</u>	SIGNED OFF BY: _____
DATE: <u>18/11/01</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in